

Method for manufacturing a multilayer coating, and aqueous dispersion suitable for this process.

Patent Number: EP0297576
Publication date: 1989-01-04
Inventor(s): PATZSCHKE HANS-PETER DR; GOBEL ARMIN; MEIER HANS ULRICH DR
Applicant(s): HERBERTS & CO GMBH (DE)
Requested Patent: ☐ EP0297576, B1, B2
Application Number: EP19880110471 19880630
Priority Number(s): DE19873722005 19870703
IPC Classification: C09D3/72; B05D1/38; C08L75/00
EC Classification: C08F283/00B, B05D7/16
Equivalents: ☐ DE3722005, ES2032313T, ☐ JP1029471, YU126888
Cited Documents: US4318833; GB2170501; US4373053

Abstract

There is described a method for manufacturing a multilayer coating and a coating composition suitable for this purpose comprising an aqueous dispersion of a polymer having particle diameters in the polymeric phase of from 10 nm to 500 nm, said polymer having a number average molecular weight of from 10,000 to 500,000 and an acid number of from 12 to 40, and the dispersion having been obtained by chain growth polymerisation without emulsifier and in the presence of water-insoluble initiators, of a) 0.65 - 9 parts by weight of carboxyl-free unsaturated monomers which in addition to the unsaturated bond contain no further groups which are reactive under polymerisation and curing conditions, together with 0 - 65 % by weight, based on the total monomers, of polymerisable hydroxyl-containing monomers and/or 0 - 7 % by weight, based on the total monomers, of ethylenically unsaturated monomers, in b) 1 part by weight, based on the resin content, of an aqueous dispersion of a urea group-containing polyurethane prepared by chain advancement from a polyester-based NCO-containing prepolymer having an NCO content of from 1.0 to 10 % by weight with at least two urethane groups per molecule and with carboxyl groups corresponding to an acid number of 20 - 50 and having a number average molecular weight of from 600 to 6000, with a polyamine having primary and/or secondary amino groups and/or with hydrazine in aqueous medium in the absence of any emulsifier.

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